

## REPORT

CD NO.

East Germany

DATE DISTR. 11 December 1953

# The Supply of Materials for East German Vacuum Tube Manufacturing Plants

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SUPPLEMENT TO  
REPORT NO.

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THIS IS UNEVALUATED INFORMATION

On 7 September 1953, the East German Council of Ministers reached a decision on the strength of which immediate steps were to be taken in order to eliminate difficulties in material procurement for vacuum tube manufacturing plants. The decision was the result of previous reports of the Main Administration RFT of the Ministry for General Machine Construction which termed the material supply situation as "catastrophic" and which stated that continued transmitter operations in East Germany would be impossible if necessary steps were not taken immediately.

Pursuant to the decision of the Council of Ministers, representatives of the HV RFT of the Ministry for General Machine Construction, DIA Metall, and of several enterprises manufacturing vacuum tubes met for the purpose of determining which essential materials were to be imported before the end of 1953. The following persons took part in the session:

Witzky	DIA
Blum	DIA
Wolf	HF Werk, Berlin
Raethen	HF Werk, Berlin
Boehm	Roehrenwerk Anna Seghers Neuhaus
Eschenbach	Berliner Gluehlampenwerk
Seehausen	Roehrenwerk Muelhausen
Mueller	Funkwerk Erfurt
Schmidt	Funkwerk Erfurt
Koehne	Roehrenwerk Phoenix Rudolstadt
Jacobi	Roehrenwerk Phoenix Rudolstadt
Hartwig Mueller	HV RFT
Marche	HV RFT

3. The following list contains the materials declared urgently necessary at the session as well as data on their specifications, amounts, prices and delivery dates. Comments contained in the protocol of the session are also added.

a. Fink wire 0.5 millimeter (Fink-Draht)

1,500 kilograms- 110,000 DME

One hundred kilograms are to be delivered by DIA Metall every week. Delivery can start as soon as the Ministry for Foreign and Internal German Trade releases the necessary currency funds.

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b. Nickel-wrapped copper wire (Kupfer-Nickelmanteldraht)

250 kilograms - about 17,000 DM  
 For Bfirt: 50 kilogram 0.5 x 1.0 flat wire - as a substitute, if occasion  
 For HF, Berlin: 100 kilograms, diameter 1.5 arises, 0.85 or 0.90  
 100 kilograms, diameter 1.65

DIA Metall is to instigate purchase negotiations immediately for delivery to HV RFT by the end of September. Currently a shipment of over 800 kg falls within the agreement, yet no goods permit (Warenbegleitschein) has as yet been obtained for the delivery of the goods. If the merchandise permit is not forthcoming by the middle of October, the 8 kg shipment will have to be discounted. The DIA is to report further on the status of this delivery.

c. NICKEL-WIRE

45 kilograms - about 20,000 DM  
 Neuhausen: 40.9 kilograms of 0.04 x 0.5  
 Neuhaus: 1.5 kilograms, 0.20 x 0.45  
 0.8 kilograms, 0.54 x 0.043  
 1.8 kilograms, 0.20 x 0.06

Delivery dates: 5 to 10 kilograms by 25 September, and the rest in late October and November. Additional 25 kilograms mid-October, November, December.

d. Nickel-N-wire (Nickel-N-Draht)

1.5 kilograms - 800 DM  
 Neuhaus: 1.5 kilograms, diameter 0.124 mm.  
 Order to be placed by 22 September with DIA Metall via DHZ Metall.

e. Nickel cathode pre-drawn tube (Kathodenvorziehrrohr)

170 kilograms - about 30,500 DM  
 Neuhaus: 170 kilograms, 12 x 1  
 Order with DIA Metall via DHZ Metall by 22 September.

f. Nickel cathode pre-drawn tube

260 kilograms - about 62,000 DM  
 HF, Berlin: 200 kilograms, 6 x 0.5  
 20 kilograms, 12 x 1  
 30 kilograms, 16 x 1  
 Order for positions 1 and 2 have already been passed to DIA  
 Position 3 is to be ordered by 18 September. Metall via DHZ Metall.

g. Cathode-Nickel wire

25 kilograms - about 20,000 DM  
 HF, Berlin: 10 kilograms, 0.1 mm plus/minus 0.02, soft, blank, quality A or B  
 10 kilograms, 0.2 plus/minus 0.02  
 5 kilograms, 0.3 plus/minus 0.02  
 Order: 16 September 1953

h. KOVAR I (48)

205 kilograms - about 14,000 DM  
 Phoenix Rudolstadt: 75 kilograms, 160 x 0.5 in fabrication lengths  
 30 kilograms, 160 x 1.0  
 HF, Berlin: 70 kilograms, 150 x 0.6  
 30 kilograms, 150, x 1.0

The Ministry for Foreign and Internal German Trade cannot make available the necessary funds. Special funds must therefore be made available. A final decision is to be made by mid-October.

i. KOVAR tube for glass leads (Glasdurchfuehrung) 1 x Q1

5 kilograms - about 2,500 DM  
 The order is to be placed by HV RFT through HV Feinmechanik u. Optik VEB Optik Jenaer Glaswerk Schott & Gen., Jena, via DHZ Metall to DIA Metall by 22 September

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j. KOVAR I tube (VACON 10), softened by annealing (weich gegluet)

(in factory lengths)

60 kilograms - about 6,500 DME

HF, Berlin: 5 kilograms, 9.2 x 0.6

30 kilograms, 11.2 x 0.6

20 kilograms, 16.2 x 0.6

5 kilograms, 19.2 x 0.6

Already ordered with DIA Metall by HF

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k. Purest zirconium metal (Zirkon metallisch-reinst)

30 kilograms - about 3,000 DME

Erfurt: 7 kilograms

HF, Berlin: 23 kilograms

The orders are placed with DIA Metall. Imports from the Soviet Union are expected on the strength of recent negotiations. The quality is not known. DIA has ordered 50 kilograms from the Soviet Union. Tests take 8 to 12 weeks, so that zirconium from the Soviet Union will not go into 1953 production. It is, therefore, necessary that DIA Metall procure zirconium for 3,000 DME from a previous supplier. The final date of delivery has been set as 25 September. Orders beyond the 30 kg. total were submitted by 22 September.

l. Thoriated tungsten wire (thorierter Wolframdrahte)

26 kilograms - about 47,000 DME

HF, Berlin: 25 kilograms; thorium contents 1.8 percent

Rudolstadt: 1 kilogram, 1,000 meter 0.2; thorium contents 1.8 percent.

The trade agreement no longer includes tungsten wire. Furthermore, Berliner Gluehlampenwerk will not be able to deliver thoriated tungsten wire before the end of 1953. HF and Phoenix are therefore instructed to withdraw the Berliner Gluehlampenwerk order and to order 26 kilograms of thoriated tungsten wire from DIA Metall via DIA Metall. Delivery will probably be made at the end of the year or early in 1954.

m. Palladium diffusion pipe (Diffusionsrohre)

3 pieces - about 100 DME

HF, Berlin: 2 x 0.1, length 100 mm.

The order placed with DIA after approval of Finance Ministry will be carried out as soon as possible.

n. Purest aluminum oxide

32 kilograms - about 600 DME

It must be determined whether 600 DME can be made available for the chemistry sector from the special funds of 500,000 DME. They are to be used to import 32 kilograms of purest alu-oxide from Degussa.

o. Bimetal (Bi-Metall)

900 kilograms - about 45,000 DME

For Main Administration Kabel-Apparatebau. Delivery time: two months.

p. Sheet molybdenum (Molybdänblech)

218 kilograms - about 30,000 DME

Erfurt: 10 kilograms, 0.12 x 12 x 100

112 kilograms 0.2 x 200

76 kilograms, 1 mm x 180

20 kilograms, 1.5 x 120

Quality: soft, ductile.

q. Molybdenum rods

30 kilograms - about 25,000 DME

10 kilograms, 1 mm

5 kilograms, 1.8 mm

5 kilograms, 1.2 mm

10 kilograms, 2.5 mm

Quality: fusible, flexible, soft-polished, hammered in straight pieces, about 1 mm.

Sheet molybdenum and molybdenum rods of hard quality are being delivered

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by the Soviet Union. The technologists of RFT enterprises are to find out immediately which plants or installations can be called upon for after-treatment of the sheets. The Werder plant of VEM Schalte-  
werk should be considered first. Sheet molybdenum cannot be delivered on the strength of the Berlin trade arrangement. Procurement by other means is difficult. DIA will endeavor to procure part of the necessary sheet molybdenum of the desired quality. After funds are available, delivery can take place within four to six weeks. Delivery dates for imports from the Soviet Union cannot be indicated exactly. It is believed that delivery will take place in mid-November.

#### Tungsten wire (Wolframdrachte)

Special qualities for radio and X-ray tubes.

The quality designations used by the Soviet Union are not clear to East German specialists.

VEF, Berlin, and Berliner Gluehampenwerk have been instructed to provide information on the accurate type nomenclature prior to 16 September 1953. It is possible that Dr. Schiller, Rothenburg and Sittel can provide the information, since they worked in the Soviet Union. Main Administration RFT objects to instructions to the effect that tungsten wire is to be exclusively obtained from the Soviet Union, effective immediately, without prior clearance of the quality problems. This pertains particularly to NS and BSD wire, which should continue to be procured by DIA Metall by other means. The tube factories have in some cases only enough supplies on hand to last until the end of September. According to the import plan, 400,000 meters are to be imported from capitalist countries. The remainder of the 3,100,000 (sic) is to come from the Soviet Union. East Germany objects to this, because it is not clear whether the Soviet Union is able to deliver NS and BSD wire.

#### Tantalum wire (Tantaldrachte)

Funkwerk Erfurt needs: 1. 750 meter 0.3 mm  
2. 120 meter 0.25 mm

In position 2, 0.20 mm wire can be used as a substitute. Position 1 with the following analysis only can be obtained from the Soviet Union.

Niobium	20 percent
Tantalum	79 percent
Others	10 percent (sic).

Sheet tantalum needed by Funkwerk Erfurt:

1.8 kilograms, 0.2 mm x 200 x 1,000  
14.3 kilograms, 0.3 mm x 200 x 1,000

This can only be delivered in USSR quality 160 mm. Erfurt is studying the possibilities of using this wire, and will notify DIA by 16 September. A possible substitute for sheet tantalum is sheet molybdenum, but it too is difficult to obtain.

#### Tungsten plates (Wolframbleche)

Although Minister Wunderlich requested Minister Gregor to make available as soon as possible the tungsten plates to be procured according to plan so that they could be allocated to Phoenix Rudolstadt, no deliveries have taken place since July. For the procurement of about 1,000 plates still lacking, 180,000 DM or other currency is required.

- It was stated at the session that the listed materials must absolutely be imported in 1953, regardless of existing economy measures. It was decided that the Main Administration RFT should notify the Ministry for Foreign Trade on 16 September 1953 of the disruption of production which has already occurred and of the effects to be expected soon in all enterprises fabricating equipment of importance for public health. It

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